RESTORATION ADVISORY BOARD MEETING

THURSDAY, OCTOBER 21, 1999

CORONADO, CALIFORNIA

REPORTED BY: Nancy A. Lee, CSR No. 3870

ATTENDANCE:

Carla Fargo

Richard Mach

John Locke

Bill Collins

Debbie Wankier

Rick Phillips

Bob Geilenfeldt

Foster Marshall

Larry McCauley

Bob Logan

Michael Pound

Alan Clark

Art Van Rooy

Vicki Raun

Wayne Crawford

Lee Saunders

CORONADO, CA., THURSDAY, OCTOBER 21, 1999, 6:30 P.M.

MS. FARGO: I'd like to thank you for coming. I will be the moderator this evening.

Before we start, I'd like to introduce Victoria Raun, who has come in representing the "Coronado Eagle Journal" and we're hoping that she will do an article on our business tonight, which might encourage members to join. We're in the process of starting a membership campaign, so I really appreciate your coming, Vicki. Thank you.

Let's look at the meeting minutes from the September 16, 1999 meeting. Are there any additions or corrections to those minutes?

I appreciate the fact that they were mailed in a sealed envelope. I did get them, so that's a great procedure.

No additions or corrections? Do I have a motion to approve the minutes as --

DR. MARSHALL: So move.

MR. CRAWFORD: Second.

MS. FARGO: It's been moved and seconded that the minutes be approved as written. All in favor, please say aye. Opposed? The minutes stand approved as written.

The next item is not on the agenda, but Wayne Crawford would like to make a statement.

Go ahead, Wayne.

MR. CRAWFORD: Thank you very, very much.

I've been a member of the RAB since -- I think the first meeting I attended was in November of 1994. And it's come to my attention the fact that I just don't have -- I've got the gray hair, but not all the time to attend all the meetings.

So I came tonight primarily to resign, but I looked at the meeting minutes of June 19th when Laura Hunter and a couple other gentlemen resigned, and I thought I would like to make a short statement on my thoughts at having served within the RAB for, gee, approximately five years. Actually, the letter that I gave Bill Collins, Laura Hunter signed as the Interim Community Co-Chair.

And the thing that I would like to emphasize is that I spent 30 years in the Navy, and I know how the Navy has had to operate since roughly 1947 to 1977 when I retired. And we, the active-duty Navy, had one primary purpose and that is to defend the nation as called by Congress and the President. And sometimes we have made boo-boos, and we have made boo-boos that we're now trying to correct, and I think the RAB system is helping that correction tremendously.

For example, go to Site 4 at North Island where when I first got -- one of the first things I went to was a tour of North Island. We saw Site 4. I play golf, and I knew you could only hit the ball 150 yards in the driving range, that sort of thing. Well, now the Navy has cleaned up the soil well enough that now we have a driving range. We can use the property for something. Before, it couldn't be used for anything.

My primary point is the fact that the Navy has tried to step forward. They kind of blew it in, I guess, the late '40s, the early '50s when they stored too many transformers and all kinds of stuff out there that they shouldn't have stored. But I think it's a step forward. And it's been a pleasure to serve in that sort of a capacity.

And I was here because of my position in Navy League, and I will -- I've talked to Bill, and we will try to get representation from Navy League, if feasible, because the Navy council -- the Coronado Council of Navy League is very much interested in the Navy in Coronado and enough said.

I really do want to say thank you. I've learned a lot. I learned a lot about chemicals that I didn't know anything about. I know there are things that we did very wrong in the '40s and the '50s, and they're trying to correct them and are making progress.

But on the other side of the coin, at least from my background and my experience, you sometimes have to -- you've got to look at both sides of the coin is what I'm saying, and sometimes in a military application you can only look at what you have to do because of the military requirements, and then you have to come back and try to rectify everything that maybe hasn't been done as well as possible, and I think the RAB is something that is helping the Navy to do that.

End of sentence. End of -- thank you very much for the opportunity.

MS. FARGO: Thank you very much, Mr. Crawford. You will be sorely missed. I appreciate your insightful words and any recommendation that you could make to any of your colleagues or community members, we are still interested in taking in new members. So pass the word on, and thank you so much for your time and effort.

MR. CRAWFORD: Thank you.

MR. McCAULEY: Can I ask Mr. Crawford, are you going anywhere?

MR. CRAWFORD: No. It's just that too many things have happened. I just have not found the time because I can look back over the time frame and I would make every meeting, and the last six months I think I've made one meeting. I mean, just so many things.

And the original letter asked for a two-year commitment, and I'm not chastising the original letter here because I did enjoy it, and I've enjoyed meeting the people I've met on the RAB and that sort of thing, but I just found too many other commitments.

MR. McCAULEY: I, too, want to echo that we'll miss you a whole bunch.

MR. CRAWFORD: Thank you. I appreciate that.

MS. FARGO: Continue to look for the announcements in "The Journal" and if something catches your eye, please come as an at large member of the community. We'd be happy to have you.

MR. CRAWFORD: Thank you very much.

MS. FARGO: The next item is the evaluation form, and Rich Mach wants to tell us about that.

MR. MACH: If you recall, those of you that were here at the last meeting, toward the end of the meeting Foster gave us some very good comments about the presentations we make. And we, the Navy, signed up at that point to say, "Okay. We'll put out an evaluation form."

If we're going to get better at making presentations at the level that you all want to understand, we need feedback.

And so what I've done is I put together an evaluation form, which hopefully you've all had a chance to pick up from the back. It has each of the topics that will be discussed, and towards the end of the meeting -- it's another agenda item -- we'll go through some of these evaluations, if you care to talk about it, and give us verbal feedback as well. We're also going to take your written comments, and that will help each of the speakers evaluate their own presentation, and hopefully future presentations will be right on the mark for everyone to understand.

So that's what I've done. And if you have any comments on this evaluation form, other questions you think should be asked, ways to evaluate our presentations, we'll take that feedback as well.

MS. FARGO: I had a comment about what I read in the minutes from last month. Unfortunately, I wasn't here, and I thought that was a good topic to bring up, the level of complexity or expertise in the presentation of Navy consultants.

That's really what we're talking about; correct?

MR. COLLINS: Or anybody.

MR. MACH: Well, the Navy consultants and Navy representatives.

MS. FARGO: Okay. That's true.

And I was just curious about the process of how we develop a presentation, and my understanding is that a lot of the presenters give you a formal, lengthy presentation at the monthly manager's meeting sometimes the day of the RAB meeting, sometimes not; and then there's a boiled down version given if it's a topic for the RAB meeting.

Is that more or less correct?

MR. COLLINS: That has happened several times, but not always.

MS. FARGO: Okay. Because I think if I were a presenter and you said to me "Well, I want you to give a presentation," and I had a nice, big thick report with all this good stuff in it that was very near and dear to my heart, I would want to do it justice from a professional technical standpoint, and I think that's why the presentations tend to be very professional. Maybe a little in depth. I don't know. How do you boil this stuff down is one problem.

So how are we communicating to the presenters what is appropriate for the RAB and that would be something that you're doing because we don't have input. We pick a topic and then a presentation is made.

Do you give them a time?

MR. COLLINS: And we will tell them you've got 20 minutes or 30 minutes to make a presentation, and sometimes we might personally meet with them or talk to them over the phone about what we want to see.

MS. FARGO: Right. Well, isn't it important to know what the RAB members want to hear? And I say that only in the sense that there are so many sites at North Island, and they all have multiple interesting problems, but I think -- I'm only saying, "Okay, I need to get a handle on this

site. What are we talking about? Are we talking about free product floating on the groundwater and how much?"

So that's why I'm always asking those questions. That's the bottom line that I want to know about. What is the contaminant? Where is it? Where are your stations picking it up? And how are we doing?

And I love the presentations, but I want the RAB members to speak up now and say are the presentations too technical? Do we need more of a bottom line approach?

Can we take just a couple more minutes and discuss this, RAB members.

MR. GEILENFELDT: I think it would help, if I may say something, if one could attend some of these quarterly management meetings one day, and those really give a dumb gringo like me some insight as to what all this terminology is about.

I feel more confident when I come to these meetings because I've had the opportunity to sit through these other technical sessions.

MS. FARGO: I've done that, too, and I think the quarterly manager meetings are very appropriate for as technical a discussion as you need. There are regulators at them frequently. We need to be hashing out the nuts and bolts.

But for the RAB meetings, do you think the presentations are too technical? I need to know what you think.

DR. MARSHALL: That's what I said last time.

MS. FARGO: Okay.

DR. MARSHALL: So I don't need to say any more.

MR. CLARK: I've been a member along with Wayne. I think they've done an excellent job of covering things and, granted, sometimes it's very technical and it's hard to follow if you're not an engineer or whatever, chemist and that.

But I think the job they've done -- and you can definitely see progress, and there's always going to be skeptics that aren't going to want to hear whatever they say. And I think they've done a excellent job, though -- Richard and Bill and everyone that's been involved.

I think the Navy is sincerely trying to do things, and we have national security to consider. So all things told, I think they're doing a great job.

So now that we're finished with this, let's go clean up the streets of Coronado.

MR. VAN ROOY: I think they've done a super job of balancing the presentations. In other words, when we get into a new area, generally we need some technical background before we can even understand the cleanup process.

So usually -- at least I feel that the presentations logically flow from that to what is the current status.

MS. FARGO: Okay.

MR. McCAULEY: Carla, I want to say something, too.

I think these guys have accomplished a balancing act. Initially when we first started this, you had people like Laura Hunter, even the bay keeper, and some of these folks were a little more savvy about these matters than most of us, I would say. So it was a little difficult for them, I think, to not bore those folks but then, again, educate the rest of us.

It might be different now. Those folks aren't here anymore, so maybe they can gloss over the material. I don't know.

MS. FARGO: Well, I really did – from reading the comments from the last meeting, I really did want to hear from everyone. It sounds like most people are pretty satisfied.

I have a bit of a technical background. I find them usually pretty interesting, but I still want a bottom line. That's how I am. But I'd like everybody to continue and give input.

I don't want to lose members because people are sitting there thinking "I don't know what they're talking about. I don't need to be here." That's not the purpose of this. The purpose is to exchange information. So we all need to be getting it, whatever it is. And so if we're pretty satisfied with how things are going, then --

DR. MARSHALL: Let me make a comment.

MS. FARGO: Sure.

DR. MARSHALL: You might have said this earlier. I'm not real sure. A few years ago you had less complicated, and one or two said, "Make it complicated so that we can get it so high."

MR. COLLINS: I said that.

DR. MARSHALL: And a lot of people were coming then, and now not many people come because it's too high. That's the only thought that I had.

But I think we can all read it, and we can all understand it and read the details of it, but in a meeting like this you don't need to go into so much detail. And as I said, KISS, keep it simple, stupid. And that was my attitude of it.

This thing is a good idea. Excellent. That way we can -- I can say what I want to without being admonished by somebody across the table for saying whatever I might want to say. No people in here present, I must say.

MS. FARGO: Then we will do our best to fill these out, and thank you for preparing the form, and you'll have one of these ready for us?

MR. COLLINS: Every month.

MS. FARGO: Every month with the presenters. You guys are great. Okay.

Then we will go on to our first presentation on the relative risk and training by Michael Pound.

MR. POUND: Does everyone have a copy of the handout? It was up here on the table.

Good evening. My name is Michael Pound. I'm with Southwest Division. I am the IR program technical manager for the Navy for California and Arizona and New Mexico. I work in the environmental engineering division of the Engineering Department.

And I've been requested by Bill and Rich to come and talk today about the Department of Defense's Relative Risk Site Evaluation Model, which is one of the elements we use to prioritize spending for cleanup of our sites.

What I'm going to cover in my presentation is three things: basically, what is the purpose, how does it work, and then we're going to run through a couple of examples for some sites here at North Island.

I've been working in this program since 1990, and in the very early days there was money galore to spend on this program. If somebody needed to do something, money was there. Starting in about the '92-'93 time frame, the amount of money that was available to do the cleanup started to shrink, and the amount of requirements we had were exceeding our budget and we had disagreements with the agencies on what should we be spending our money on.

In about the '92-'93 time frame the Department of Defense put out some directions for -- I've got ER,N up there, and what that stands for is Environmental Restoration, Navy. That's the funding account we do our cleanups through for the sites here at North Island.

And in that guidance they put out, they put out that we would develop a relative risk site evaluation model that we would be using to group the sites into high, medium, and low priorities. And when they put the guidance out, it hadn't been developed.

So basically they're saying we're going to do this, and we're going to get a group forum that's going to come up with the framework on how to do this; and that we want this framework to be used by all the Department of Defense, all the other services -- the Army, the Air Force, et cetera -- and that we want the public and the community to understand what we're doing with it.

So what this framework does, we're taking data from our sites, and it's providing a relative assessment of that point in time of the relationship between the contaminants present at the sites, their ability to migrate, and what are the potential receptors for that site.

As I said earlier, how that relationship falls out, we assign a high, medium or low priority, and it's modeled on EPA's Risk Assessment Guidance.

So what we're doing is we're looking at the relationships for the different environmental media at the site -- groundwater, surface water, sediment, surface soil. We always want to evaluate all these media at all the sites because some are not present.

So what we have in this model is three different factors that are evaluated in conjunction together. The first factor is the Contaminant Hazard Factor. That's basically how much contamination is present at the site. We're looking at chemical concentrations.

The second factor is called the Migration Pathway Factor, and that is basically a judgmental evaluation based on the data we have about the ability to migrate or whether contamination has actually migrated to the site.

And, finally, the third factor is the Receptor Factor, and that's basically we're looking at whether humans or sensitive ecological environments are present or nearby the contamination.

Before I get into the details of how the relative risk site evaluation model works, I just want to point out a couple of things about what it's intended for and what it's not intended for. It's just intended to be an evaluation of the site conditions at a particular point in time. It is only to be used for sequencing sites for funding. That's the only thing it's supposed to be used for.

There's been some confusion about a couple other things. When we're doing this assessment, it's not to be used in place of a baseline risk assessment. You can't use it to close a site for no further action.

And there's a couple of different sites we can't use it for. We can't use it for sites with unexploded ordnance, demolition of buildings, potentially responsible party sites. These are sites where the Navy has shipped waste or contamination off-site to a landfill, and that landfill has had environmental problems, and EPA is coming back and saying "You're partially responsible for paying the bill for the cleanup of this site."

Going into the first factor, and that was the Contaminant Hazard Factor, and basically what we're doing here is like for each media -- let's take groundwater -- we basically go to our current data, the chemical data for the site, and look up all the groundwater concentrations for each of the chemical constiuents we have, and we enter them in the model.

And I'm going to go into how a calculation is done, and I'll explain how the calculation is done, but I think what happens is it's a sum of those calculations. And if the sum is over 100, it's considered significant. If it's between 2 and 100, it's considered moderate; and if it's less than 2, it's minimal.

If I'm going too fast and you don't understand something, please let me know.

Again, let's use groundwater as an exa mple. What happens when calculating the Contaminant Hazard Factor? Is it like -- say I have TCE. What it does, it goes into the database and it looks up Help Base Values for TCE. In this case carcinogens are set at a level of 10 to the minus 4th residential risk. And there's a reason why we did not set it on the 10 to the minus 6th diminimus

level that's commonly discussed in the NVP, and the reason is that chemicals have a carcinogenic effect and a non-carcinogenic effect. Sometimes they have both; sometimes they don't.

What would happen when we run simulations is that cancer would always trump sites with non-carcinogenic risk only. So cancer was overwhelming things, and we were trying to get a better priority. So we wanted to make sure that sites with significant risk from non-carcinogenic effects would receive appropriate priority in the funding scheme.

Now, for ecological: When we evaluate the ecological system, we only have a couple of things we can use. There isn't the huge database for chemicals for ecological systems like there is for human health.

So basically what we're looking at for surface water, we're using the Ambient Water Quality Criteria for EPA's lowest observed effects level if there was not an Ambient Water Quality Criteria. We also have been using sediment criteria from NOAA or contaminant from the Ontario Ministry of Environment and Energy.

The second factor is the Migration Pathway Factor. And, again, what we're doing is we're looking to take our conditions at the site and fit them into one of three categories.

When we have evident migration, and basically we have environmental data, chemical concentrations or visible staining where we can see a site where a release of constituents has occurred and it's migrated. A good example would be dumping TCE on the ground and you'll see a plume that extends for several hundred feet in the groundwater.

Potential is we really don't have distinct evidence saying that we've had migration at the sites, but it's in a situation where there is a potential for it to migrate. This is also the default if we just don't know. If we've ever seen the sample at sites or if we're really unsure, this is the default to use in the process until we get better data.

And then finally the third tier is the contamination is confined. An example would be if there is some kind of geologic formation that has a clay layer that underlays its side and kind of prevents the contamination from migrating and it's basically confined into a limited area.

Finally, the third factor is the Receptor Factor. Again, you have three tiers. Identified: Receptors definitely have access to contamination. Say in the middle of this room there is a spill in the ground. And as you notice, people are walking back and forth when they came into the room. That's what identifies the receptors that we have. People that are actually accessing the site and walking or playing or we have a sensitive eco receptor such as burrowing owls that dig into a site and contamination has been released. That's an example of identified.

Potential: Again, it's kind of a -- there's really no receptors in the area. There's potential for -- let's say on a remote area of the base, people don't use it very frequently. You don't have a lot of wildlife in the area, but nothing restricts them from going there. So that's an example of potential.

It's also, once again, if we really don't have the data to make a firm decision in prioritizing among the categories is also deemed a default.

Then finally the third tier is basically we have contamination but they have no access to pull it up. An example would be subsurface contamination that has like two or three feet of clean acceptable risk, dirt on top of it, but it's presenting a leaching impact to the groundwater quality.

Next I'm going to talk a little bit about what receptors are evaluated. We don't evaluate all the same receptors for each of the media. For groundwater we're only evaluating humans, basically because an ecological receptor doesn't have access to groundwater.

For surface water and sediment we're evaluating humans and ecological receptors. We're looking at this is where things -- if groundwater is discharging into a surface water body, this is where we look at that.

And then finally for surface soil, right now we only evaluate for humans, and the reason is there is no national standard or database to use as benchmarks to do screening against to come up with information.

Next I'm going to talk a little bit about what goes into the evaluation for each of the media. The first one I'm going to talk about is groundwater.

For a Contaminant Hazard Factor we were plugging in our most current recent chemical data that we have. We're supposed to be revising and updating what we have in this database as new information comes in. For practical purposes, that usually typically means once or twice a year.

Then the Migration Pathway Factor, basically we're looking to see if the area where we release contaminants have hit the groundwater and migrated off. Typically we find groundwater plumes.

And the Receptor Factor, we're looking at certain things. For groundwater if it's not usable for drinking water sources or if it really has no beneficial use, even though it's considered a receptor in the way this works in the scheme of funding, it does not receive a high priority. It's a low -- in the low tier for Receptor Factor because of the lack of use.

MR. McCAULEY: How would your MTS data be for migrating offsite?

MR. POUND: Once again, Contaminant Hazard Factor: If something changed to the site, we're responsible for going back in and updating the database to have a rank for the site that reflects -- for practical purposes I would say semi-annual.

MS. FARGO: The point about the Receptor Factor all being low if it's non-beneficial use of water, are there any beneficially used waters in contact with the Navy base at North Island?

MR. COLLINS: The bay.

MS. FARGO: The bay is beneficial use.

MR. MACH: But that would be evaluated under surface of water rather than buried in groundwater.

MS. FARGO: Right. So am I correct to say that we will never -- by default you are never going to have an over 100 in the big end calculation because you have such a low amount for the RF?

MR. POUND: I'm going to tell how all three factors come together at the end here.

MS. FARGO: Okay. I'm jumping the gun.

MR. POUND: I'm trying to set the table to say this is how it is and then show you what we've got.

MS. FARGO: Okay.

MR. POUND: Then I'll address your question when I do that.

MS. FARGO: I just want to be sure.

MR. MACH: He'll give you examples that really show you.

MR. POUND: I'm sure your heads are swimming as I give this presentation.

Once again, with surface water and sediments for the Contaminant Hazard Factor -- again, using our most current recent data -- if it's migrating, it's a little harder -- I mean, basically you're having to look at your data and make a judgment about whether you've got a high or medium, low type of migration situation. There's no clear-cut criteria.

Our Receptor Factor: You know, once again, you look at your data. You're kind of making a common sense choice. Typically, as I said here, you're going to have identified or potential because typically with the surface water body you're going to have some kind of eco environment that can be potentially in contact with it. Same thing with human swimming, fishing, et cetera.

On surface soil, it's a little trickier than the other media in that our guidance tells us that the data we should be using is what we have in the 0 to 6 inches. And then it may or may not be really representative of what we have at the site because in our baseline risk assessments we're looking at the 0 to 10 feet.

So I kind of tell the people that I work with here at Southwest Div, you know, that's guidance. Take a look at what's in 0 to 24 inches. But, you know, if you've got like a super hot concentration of something but it's down like at eight or nine feet, we're really not going to get a human in contact with that any time soon unless for some reason we have a flood and massive erosion, and that's going to bring that up to the surface.

So, once again, you're kind of looking at your data set that we normally use for a human health evaluation in the relative risk assessment process, and kind of picking out of that what really makes sense to plug in for concentrations when we're looking at surface water.

Once again, in your Migration Pathway Factors and Receptor Factors, it's very similar to the other medias. Basically looking at our data set, do we have visible or chemical data showing that the contamination's migrated or migrated significantly.

And, once again, do receptors have access at the site. Are they at the site or are they using it versus if it's confined in a remote area of the base where there's not much activity present.

Well, so we have these three factors. So what is the Navy doing with them? Basically what happens is -- as I mentioned earlier, with the Contaminant Hazard Factor, we had the three tiers. If the sum of the numbers that's done through the calculation is over 100, you go to this box. If it's between 2 and 100, it's this. And if it's less than 2, it goes to that box.

And basically that's when you have the significant, moderate, and minimal Contaminant Hazard Factor.

Then this next thing that the program does, it looks at how we answered the Migration pathway factor and the Receptor Factor questions. So if I had contamination where the Contaminant Hazard Factor was over 100 -- but kind of getting back to your question, Carla, it said, "Okay. I don't really have a whole lot of receptors for non-beneficial use groundwater, so I'm looking at receptors and I'm looking at limited.

Then depending on how you answer the migration question about evident, potential, and base confined, basically you're looking at how they intersect. So if it were to have potential migration in a limited receptor and I have a Contaminant Hazard Factor over 100, it puts you in this box right here, which has been designated a medium rank.

Did everyone understand that? Because actually we're going to go through some North Island spots.

MR. MACH: I think that one of her big questions, too, was if you don't get over 100, you can see that you can have even less than 2, but based on your pathway and your receptor, you can still be a high risk site.

If you look at the far right box there, there is high in that box as well.

MR. POUND: I'll tell you what, the reason we have a high box here is, once again, make sure where we have sites, where we have non-carcinogenic risk problems and they receive the appropriate type of funding.

The hard core position would be if you had high contamination but it was confined and limited, you're going to get a low and the bean counter is going to say "Why should I fund that. I don't have any near term or immediate risk that I have to worry about.

MR. GEILENFELDT: Let me ask you this question: How does the potential for earthquake affect these factors? For an earthquake prone area such as San Diego could be, how does that impact on what you're telling us?

MR. POUND: It doesn't really. Just because we're in an earthquake zone doesn't mean that the contamination is going to move faster or slower.

You know, it can't foresee all the things. Basically what it's doing is taking that data we have at the site -- it's like a snapshot in time. Here's what we have today, and we plug all that in for the different factors, and it basically spits out a rank. If an earthquake occurs and something happens in a site that was confined, now becomes potential or evident based on what happens after the earthquake, basically we re-rank the site and it moves out this low box into one of these other boxes.

MS. FARGO: Is it just the high sites then whether they have a CHF of 100 or 2 to 100 or less than 2? But it's just the high in these two categories that are vying for funding; is that correct?

MR. POUND: Well, we have what's called defense priority goals, and they want us to spend I think it's 70 percent of our money on high sites. Then there's other factors that come into play. Well, have we already started work there we need to finish? Are we doing a high site and is there like another site that's like nearby and does it make sense to fund both at the same time or tie this to scale?

MS. FARGO: Okay. And how often are these ranked? How often do you do your ranking scheme? Annually?

MR. COLLINS: They get evaluated twice a year.

MS. FARGO: Okay.

MR. GEILENFELDT: Excuse me. The fact that Coronado's human consumption of water is imported, it's drilled in the ground, it's not brought up from the ground, that puts us in a lower category on this chart because that is not a considered --

MR. POUND: Well, I'll say it this way. If there's a site at North Island that's in the center of the island and there is contamination there and it's not migrating, you're right. It's going to be

probably a medium or a low versus if it's at the bay and there's evidence that it's leaking out into the bay like at Site 9, that's going to put you in a high category here.

MS. FARGO: So it's just a question of when all of these things will get cleaned up and you're trying to do them -- by looking at the risk potential, you're just trying to be, I guess, as cautious as you can to keep the risk as low as you can?

MR. POUND: Well, I would say that the goal of our program is risk reduction and eventually site closure. So we want to make sure that we're spending our money appropriately and not running around and doing easy things that really have no significant risk reduction.

MS. FARGO: Okay.

MR. POUND: Currently I believe there's a goal of having the program done by 2007.

MR. MACH: I think it's 2015.

MS. FARGO: The site closed?

MR. MACH: All of the Navy sites closed by 2015.

MR. POUND: And what we mean by closed is through the CERCLA process to the RoD -- Record of Decision. But the way the funding situation is every year, I mean, everyone talks about wanting a balanced budget and those kinds of things, and what that means for us is that we have very tight funding, and typically it's been down over time.

MR. McCAULEY: All Navy sites closed?

MR. SAUNDERS: That's listed in a public document, the Department of the Navy's Restoration Document that you can get a copy of. It says through fiscal year 2014.

MS. FARGO: That's good to know.

MR. POUND: There's another way -- same scheme with the high, medium, and low doesn't change. But, once again, the bean counter type people want to know "Well, gee, how can I tell the Hydes of Park what box they're in, so they went in and they numbered each of the boxes so that like this would be -- since this is the X box, this is the Y and Z -- so this high here is also called an X1. Like here this medium is called a Y5. Some people wanted to know where they fell within the boxes.

The Navy also had some goals when we originally initiated and continued to do it, and that is maximize applicability. You know, our mandate is that we get some sampling done at all our sites to get them ranked -- to get them prioritized for funding.

We also want the stakeholders -- which means the RABs and the regulatory agencies -- to have an opportunity to provide input into this process when we do the ranks.

And it probably -- I don't know but it may sound a little complicated to you when I tried to explain it, but we really wanted to try and make it as easy and user friendly to do. And I think when we go through some example sites, it will probably clarify how this thing actually works.

The first one -- these are also in your handout. This is Site 9, cleanup at Site 9. So here at the top we have the information that went in for the Contaminant Hazard Factor. You can see a list of chemicals, and these are the maximum concentrations we found at the site for each of these constituents. There's actually more than is actual listed up here, but it only prints out this.

MR. COLLINS: It's too little anyway.

MR. POUND: Anyway, I talked about those standards. These are Health Base Standards here. These are EPA Region 9 PRGs for tap water, and so basically what it's doing is taking our maximum concentration for methylene chloride. It was 320,000 parts per billion, divided by the standard of 430 parts per billion, and came up with a ratio of 744.

So basically what the program is doing is calculating that ratio for all the constituents we added and sums it, and it's a huge number and that's why it won't print here. So that definitely puts this site -- so when you go back to that sign over 100, it puts it in this set of boxes here.

I think, Bill, you're the RPM for the site; right?

MR. COLLINS: Yeah.

MR. POUND: So when Bill was doing this, the next thing he did is he went in and said, "Okay, what do I have for Migration Pathway Factor?" And he marked "Evident," and it means that "Analytical data or observable evidence indicates that contamination in the media is moving away from the source."

And I'm sure at many RAB presentations you've seen the plume out, and there's no dispute that that's occurring at the site, so that's how we got the evident.

Then he looked at the Receptor Factor and picked potential, which is "no potentially threatened water supply, potentially usable for drinking water, irrigation, et cetera."

Could you explain how you picked potential for the site versus --

MR. COLLINS: I picked potential because -- actually, when I did pick this, we did not know it was hitting the bay. It had the potential to flow into the bay, so I picked the bay as my downstream beneficial use source. There was a good chance of it getting there and it did.

MR. POUND: So selecting evident for migration pathway, put this on this line here, and as Bill had also selected potential for receptors, so basically here's the intersection of those two, and you get an overall rank of high for the site.

MR. GEILENFELDT: So does that mean this site has priority on funding?

MR. POUND: Yes.

MR. MACH: Very high priority.

MR. COLLINS: Very high priority within our division within the Navy, certainly at North Island.

MS. FARGO: Are there any sites at North Island higher than this one?

MR. COLLINS: No.

MR. POUND: How am I doing on time?

MR. MACH: Keep going. You've got plenty of time.

MR. POUND: Here is UST3. Again, we entered the contaminants we had present at the site. At this site there was only five maximum concentrations. Each of those concentrations were divided by the standard -- the human health standard, ratio calculated, and it came out to 23.6.

So what that does is put this site in this block, the moderate contaminant hazard factor block.

I think, Richard, this is your site. Could you explain how you picked "Potential" for Migration Pathway Factor and then "Potential" for the Receptor Factor?

MR. MACH: Basically the underground storage tanks, and there's several of them grouped into this UST03 category. They're all petroleum based tanks. They're at different areas throughout the base. Some have leaked; some have not leaked. So the potential is there for the contaminant -- the fuel, essentially, to migrate off the site, and the potential is there for there to be a receptor to come in contact with it.

MR. POUND: So for this site we didn't have any analytical data saying it definitely had migrated off site?

MR. MACH: Right.

MR. POUND: So you're kind of like using the default as the guidance recommends? Same thing for the receptors?

MR. MACH: Right.

MS. FARGO: Why wouldn't you have a sheet for every tank? Do they all fall out the same, do you think? Would they?

MR. MACH: Well, there's a couple of things with that. One, it's an awful lot of work to try and have a different ranking for every single tank; and B, if you group a group of tanks together and you have one bad one, you get funding you can use for the worst contaminant data and get funding for a whole bunch of others. So it's a little game we play.

MR. POUND: Well, at Camp Pendleton there's over a thousand USTs. So you can imagine doing this a thousand times plus for the other CERCLA sites.

MS. FARGO: But do you at least take the worst case scenario? You know your tanks. You take the worst case scenario, and that's what you go with.

MR. MACH: Right.

MS. FARGO: Okay.

MR. POUND: We pick the worst contamination and then --

MS. FARGO: And then what's known.

MR. POUND: Right. And then we make our judgments on the Migration Pathway and the Receptor Factor.

MS. FARGO: Okay.

MR. McCAULEY: I've got a question. Have these tanks been upgraded?

MR. MACH: These tanks, which are -- as Michael said, ER,N eligible or cleanup program fundable -- have been removed, are no longer in service. So the whole upgrade requirement is not an issue for these tanks.

MS. FARGO: So we can close them out.

MR. MACH: They've either already been removed or they're going to be removed and are not in service.

MS. FARGO: And haven't been signed off.

MR. MACH: Some have; some have not.

MR. McCAULEY: But this site hasn't.

MR. MACH: There are a whole bunch of tanks under this group, so I couldn't tell you whether every one has been signed off or not.

MR. McCAULEY: Okay.

MR. POUND: So for this site we had a Contaminant Hazard Factor of 23, which puts it in this block. And Rich answered the two questions about Migration Pathway Factor and the Receptor Factor as potential, so they intersect here, and the site gets an overall medium rank.

Now you see on this that if -- I don't know how this could happen, but the UST, which is subsurface contamination, but the reason we're able to identify the receptor, you can see by changing that to identified, that shifts the rank to high. Also, if there is -- we finally determined that there is no receptors or ever will be receptors, then the site will shift to low.

Next I'll talk about Site 7. Once again, just like every other site, contaminants, concentrations we have, the health state standards, and the ratios. So you've got a nine and a half which, again, puts it in the moderate contaminant hazard factor block.

Who does Site 7? You had picked confined for the Migration Pathway Factor and limited for Receptor Factor.

Could you explain how you came about that?

MR. COLLINS: How did I come up with confined? Well, basically the groundwater at a depth of, I think, 12 feet, there are no points of access to it. There are no wells. They're several thousand feet from the ocean, even further than that from the bay. Essentially the water is confined. There's no access. There are a lot of cover over it. There's no way that you're going to come into contact with it.

MR. POUND: And so it won't migrate to a receptor.

MR. COLLINS: Correct. From our investigations out there, it is not migrating toward the ocean or toward the bay.

MR. POUND: Okay. The Receptor Factor?

MR. COLLINS: Well, in this case the receptors have no access to the water itself.

MR. POUND: Okay.

MR. McCAULEY: How did you remove the arsenic?

MR. COLLINS: We have not removed the arsenic.

MR. McCAULEY: It says "Arsenic removed" under "Brief rationale."

MR. COLLINS: These are examples.

MR. McCAULEY: Oh.

MR. LOCKE: I think it was removed as part of the calculation of the factor.

MR. MACH: Basically when it was originally evaluated, arsenic was considered a chemical of concern; but based on further groundwater analysis, it was removed as a chemical of concern. So it wasn't -- arsenic wasn't removed from the site. It was removed as a chemical we were concerned about based on the analytical data.

You can see arsenic is not in the table up above of the contaminants.

MR. POUND: So, once again, with the Contaminant Hazard Factor of 9-1/2, Limited Receptors, Confined Migration Pathway Factor in this box, it's low for an overall rank.

And you really can see that where we are, unless there is really a limited significant change in this Contaminant Pathway Factor, changing the Migration Pathway Factor or Receptor Factor really is not going to do much with changing the overall rank of a site for funding priority.

Next I'm going to talk about Site 4. This is a site where we have conducted the removal action throughout the site for closure. I'm going to show you how the site ranked before and how it ranks now.

Before the removal action we had significant hits of PCBs at the site -- 35,000 parts per billion -- leading to a significant Contaminant Hazard Factor of over a thousand, so automatically it's putting you in that block that's on the left. And we had evidence data showing that there was potential for migration at the site, and we had identified receptors. I believe they were over by the golf course.

MR. COLLINS: Correct.

MR. POUND: And there was not access control. There was people walking back and forth on the site. So basically with all those factors that came together, it led to you being in the highest rank you can get for a high for a site.

So if you go back and look at that other -- you need a bigger table for presentations -- it's an X1 high. It's the highest of the highs. Its dollars are really limited. There's a tendency to pick a higher high over the lower highs, so this is one of those high high sites.

MR. McCAULEY: Any idea how many X1 sites that there are?

MR. POUND: I don't know. I'm just a technical person. I don't deal with the other stuff.

So we conducted our removal action, cleaned up PCBs at the site. We reran the relative risk site evaluation model for Site 4, changed the PCB concentration. I think the highest

concentrations at the site now is 45 parts per billion. It still leads to an overall rank of 12.4. But during the removal action, I believe we basically confined where the PCBs are. They're basically entombed, so there is no way for them to migrate, and there is no way for receptors to have access where those entombed PCBs are.

So that's how we picked Confined for the Migration Pathway Factor and Limited for the Receptor Factor.

So with a 12.4, that puts us in the Moderate Contaminant Hazard Factor box where we had limited receptors, confined migration, leading to an overall low at the site.

MR. GEILENFELDT: How do you entomb PCBs?

MR. MACH: Basically what we did, there were three sites that were taken care of during this removal action -- Site 4, Site 6, and Site 10. We hauled all of the PCB contaminated soil from 6 and 10 to Site 4, and we actually did the excavation in two phases.

In the first phase we excavated everything that had a concentration of PCBs greater than 25 parts per million, and we stockpiled all of that; and we took all the other PCBs that had concentrations between .066 -- which was the residential cleanup goal -- so between .066 and 25 parts per million we excavated all that and piled that on Site 4. So that was our bottom layer, essentially 0 to 25.

Then we took all that material that was between 25 and 35,000 hits that we had, and we brought on an innovative treatment technology with the solvent soil washing through Terra Clean, and we washed all the PCBs out of that soil, and the remaining concentration requirement for that treatment was 2 parts per million.

So now we had all this soil that was 2 parts per million or less, we put on top of the 25 parts per million soil so if you would ever dig into it, you would get higher concentrations as you went deeper.

Then we took all of the left over plastic that covered all the piles and we used it underneath the treatment area to catch any spills, if there were any. All of that plastic and resonance of the landfill we laid it over the top of all the material that was PCBs. And then there happened to be another construction project going on on the base where they were going to take about 10,000 cubic yards of soil and haul it off the base to a landfill. So we grabbed all that soil, and we put that on top of the plastic. So instead of hauling -- we were going to haul soil onto the base. Instead of hauling it off and then hauling it on, we ended up saving about 4,000 truckloads going back and forth through Coronado.

So essentially now what we've got is a golf course driving range which is grass covered. It has an irrigation system with 2 feet of clean soil; then a plastic liner not to stop water from going through but it's like a marker barrier. If they ever have to excavate to fix the irrigation system or do any sort of maintenance on there, they know if they hit plastic, they're in PCBs. So don't dig past plastic.

So that's essentially what we did.

MR. GEILENFELDT: Interesting. Thank you.

MR. McCAULEY: So you guys didn't put a cap on the soil.

MR. MACH: Correct.

MR. POUND: That's my presentation. Do you have other questions?

DR. MARSHALL: May I ask a question?

MS. FARGO: You may.

DR. MARSHALL: Not about his presentation, which was excellent. You gave us what we needed in a very simple manner. I understood it.

The last time we talked, Mr. Geilenfeldt and I were discussing cancers and things, this, that and the other.

I happen to have brought with me some data for five minutes, if I could steal some of your time and other time to tell you just on one subject as it relates to contamination and what we're talking about here. Would that be acceptable?

MR. MACH: Foster, you can take all my time.

DR. MARSHALL: And I'd like for the newspaper not to put my name that I had anything to do with this. I didn't bring this for publicity.

But I want to -- I've made up some documents, and on the back of the document there is a thing that I wrote up, and I would like everybody to look at it and give me some information and some feedback. It's an ad that I would like to ask "The Eagle Journal" to put in so that we can see how many -- it's a cancer survey for Coronado, one that I made up. It may not be any good. That's why I'd like for everybody to look at it.

Let me quickly tell you that one of the things that I was worried about when I first got out here was cancer. I'm a physician, and I do worry about cancer because I used to do it a lot in my practice. And the things that we worried about was what would cause cancer, what would not cause cancer.

And if you'll look at the second page on here, it gives you a list of the things that are the top 20 hazardous substances as by the ATSDR, which is the Agency for Toxic Substances and Disease Registry. And on ours about five or six of those are the things that we've got in the ground and got in the water and got seeping all over the place.

And I picked one subject out of that or one substance and it's vinyl chloride because most of the stuff that we get out of the ground is either non-carcinogenic or carcinogenic; but most of

what we get out of the ground that is carcinogenic is a by-product, and the by-product is vinyl chloride.

When you take all of the stuff that we've broken down and you put them down in the ground to deteriorate, if they don't deteriorate, nothing comes out. If they deteriorate, they come out as a liquid; and if it's a liquid volatilized, it then gets evaporated because the gas is the one that is dangerous.

And when people come in, and the EPA said -- and there's a whole article in here about vinyl chloride, and some of the things about it you can read. And vinyl chloride is a carcinogenic. It causes a very rare liver cancer, angiosarcoma. Big name for it. It's a carcinoma, cancer of the liver. It also causes some brain cancers and some lung cancers and things like this and lymph node cancers. The liver one is the biggest one.

Now, I picked only on volatiles because that is the only one of all the things we've got in here of the toxics that I find that is carcinogenic. Sure, you've got arsenic, but that's not carcinogenic. It kills you from other ways. You've got all these other things that will kill you. Kidneys will kill you, livers, but these are non-cancer. And everybody -- the big "C" word is what's got everybody scared, and particularly around here.

So I went in to look at the vinyl chloride, and I found out vinyl chloride can give you these cancers. But -- and EPA says this: It's in a closed area of workers who are around it for an extended period of time with a high concentration, and EPA's concentration is zero, by the way. They don't want anything with vinyl chloride.

And they found out that if you're in that concentration, if you're in it for a period of time chronic, you will become a potential cancer person. But there's no EPA thing for that which escape into the air, which is what this does over here on North Island.

So we have no idea what an EPA lower level is in open air, and also that dilution factor in the open air is so low that anybody who gets exposed to it is, number one, chronic nor is it -- we

don't know the dilution factor. It has to be very minuscule and therefore probably there is no -- and I say that with no hesitation -- no carcinogenic danger of any of the vinyl chloride coming out of that place, unless you're in a building and it's coming up at you all the day long and you're chronically exposed to it.

Now, that's just sort of my thing on vinyl chloride. I did not do any of the other ones mainly because I thought it was the one that was really the big bugaboo and the big bad guy.

And if you go through here the rest of the way, it goes through and talks about what the EPA says and it gives you a little picture. It talks about vascular sarcomas so you can see what they're like. And I didn't present this to try to teach you anything about medicine and cancer.

And also a quick reference index where it talks about all these things -- vinyl chloride in use for PVCs. Well, also everybody says, "Oh, my God, the toilets are made of PVC," vinyl chloride, but it's a solid and it is not dissolvable. It will not break down unless you put it in a house fire and it burns down and becomes a gas. That's why when we put these PVC things in an incinerator, it has to not have escaping gas. If it does, it's gas, vinyl chloride, which is toxic. So that's the thing we worry about.

Now, the last page that I'm going to skip on over and I'll have a few questions, if you like, is this is an environmental study of cancer. If you'll just look at that and give me some thoughts. Have you had cancer? Give me the type of cancer? Did you have a family history? And the treatment and the environment. Do you live in Coronado?

We thought a half mile close to the Naval base was plenty enough. Maybe a half mile takes up the whole Coronado, but I felt like anybody living within a half mile would like to know.

And then life style: Do you smoke? Do you exercise? Are you overweight? Blah, blah, blah.

So please look at this, add some things to it, and then I'll ask the lady from the newspaper, would you guys put this in the paper for free and have them send it to me?

MS. RAUN: I'll have to check with the publisher because --

DR. MARSHALL: Work out a deal maybe for me.

MS. RAUN: Right now I'm thinking of putting it in as an insert.

DR. MARSHALL: Well, either that or just a piece of the paper.

That's what I was going to ask if everybody agrees that we should do this, and this is the proper channel, it's what I'd like to do. That's all I had to say.

MS. FARGO: I just wanted to add, I think this is great. Thank you for providing all this information to us.

As far as your survey, I just would like to clarify what your intent is for doing the survey. Are you intending to do a professional article? Are you -- where are you going with this?

DR. MARSHALL: What we talked about, and I'm sorry the lady is not here tonight, Marilyn Field. She's the one that got with me later and said, "Why don't we do some kind of survey" and I said okay. So the thought was then let's see what people in Coronado have, and if they don't have cancers caused by all this toxic stuff, then that should be told to the people. At least give them a very -- not an official or very great thing, but just generally say "Hey, the stuff coming out over there doesn't cause cancer. It will kill your liver and it will kill your kidney but it won't give you cancer." And I think that might alleviate what people think.

So I won't make a determination what we do with it. I'll bring it back to the board and say, "This is what we've got. What do you guys want to do with it?"

MR. MACH: My initial review of this would say some of the other questions you need to ask are how long have you lived in Coronado?

DR. MARSHALL: I had that on another piece of paper and I lost it and forgot to put that in there.

MR. MACH: And what were the dates that they lived here? They may have lived here for a long time.

DR. MARSHALL: Let me just say on another piece of paper that I found this morning that I didn't have yesterday when I finished this, it has dates you lived or how many years did you live here and such and such, these kind of questions.

Instead of telling them, and I've got a pencil to write it on, why don't you --

MR. MACH: It will be in the transcript.

DR. MARSHALL: My telephone number, if you want to call me about it, is 437-6880.

MS. RAUN: You might also want to ask a question when did they develop the cancer? When were they diagnosed with cancer?

DR. MARSHALL: I've got that, too, somewhere on the other piece of paper. That's important.

MR. MACH: And also what have their occupations been.

DR. MARSHALL: Right. Unfortunately, I lost that original paper that had -- a lot of people gave me ideas on that, and then I lost it in my pile of stuff.

MS. FARGO: Well, isn't there a federal agency that keeps track of cancer hot spots in certain buildings and --

DR. MARSHALL: That's true. But I've heard that breast cancer is the hot spot in Coronado.

MS. FARGO: But what I was going to suggest is possibly if we got -- I don't know how detailed it would be or how easy it would be to get a survey that's quite widely accepted. I don't know.

DR. MARSHALL: My feeling about going through agencies -- and I'm not being negative -- is that it will be probably 2005 before we get permission to do it.

MR. MACH: I don't think she's asking that you should do it, but just get a copy of their survey.

MS. FARGO: Yes. Look at their standard survey questions because it might --

DR. MARSHALL: Okay. This is basically the stuff we ask in medical when we go out and look and see what cancer people have got.

MS. FARGO: Well, I think it would be a useful thing to do. I don't know that it's within the purview of the RAB.

MR. COLLINS: I don't think it should be a Navy request to the public.

DR. MARSHALL: I didn't even put the Navy on there. I didn't put it on the RAB.

MR. COLLINS: And we wouldn't want people to think it was the Navy doing it.

MS. FARGO: Maybe it's something you can do as a community member, and as a RAB member, I appreciate your sharing the information with the RAB.

I think we maybe need to give it some thought.

DR. MARSHALL: That's why I brought it.

And I don't want to be presumptuous enough to say that what I find out is gospel, nor do I want to be presumptuous enough to say that I'm an expert in cancer; therefore, give me your children and bring your poor and deflowered to me.

MR. MACH: We can all provide our comments to Foster, and then possibly put them on the agenda next month for five or ten minutes to give us an update as to what responses he received and go from there.

DR. MARSHALL: And I apologize for stealing time. I thought this was the ideal time to pop it in there and give it.

MR. COLLINS: That's fine.

MS. FARGO: I really appreciate all of your work. Why don't we do that.

I just -- I'm not really sure who we could consult.

MR. POUND: The agency, if I may interrupt, that you're thinking of is called the Agency for Toxic Substances and Disease Registry.

DR. MARSHALL: That's what I mentioned on the second page. Is the ATSDR.

MR. POUND: They're headquartered in Atlanta with the Centers for Disease Control.

MS. FARGO: Okay.

DR. MARSHALL: If anybody wants a copy of this, you're welcome to have it. I made a few.

MS. FARGO: I would just like to see what the RAB could do with this information. I don't want to take any shots that we've done something inappropriate, and therefore, have this whole thing come under very critical attack. I would rather avoid that.

DR. MARSHALL: Is it presumptuous of me to send out a thing like this to the City of Coronado? That's another question I need to ask.

MR. GEILENFELDT: It will be interesting to see if we could get it presented at a City Council meeting.

DR. MARSHALL: You call me; I'll do that.

MR. GEILENFELDT: Once you come up with this kind of information, I would think that the Council would be interested.

DR. MARSHALL: When does the Council meet? Morning or afternoon?

MR. GEILENFELDT: First and third Tuesdays.

DR. MARSHALL: Well, if you feel that you want me to do that, I'll be glad to.

MR. GEILENFELDT: Talk to -- I would go to the new City Manager, Mark Ohm. His assistant is Diane Givens. She would be able -- if this can be put on the agenda, she would be the one to talk to.

MR. McCAULEY: I've got a question.

You guys aren't afraid that someone might misconstrue this study and say that it was North Island that caused me to have cancer? Because I notice one of the questions here is --

DR. MARSHALL: Do you work in North Island.

MR. McCAULEY: Right.

DR. FOSTER: Well, I could drop North Island off of there and say where do you work? Where do you live? I don't want to put down everybody's address because then it identifies people, and I don't think anybody will answer if they're identified.

That's why I had to put North Island because everybody knows that that's where the toxic stuff comes from. The stuff from the carriers, the stuff from all the other junk in whatever the media.

MR. GEILENFELDT: Foster, there's a lot of pollution that comes across that bay from that Naval Station over there. I mean there's a lot of pollutants that are generated that are carcinogenic that are non-NAS.

MR. CRAWFORD: I would say an awful lot comes across the bay from areas that are not government owned.

MR. GEILENFELDT: I'm talking about the Navy. Don't get me wrong. There's a shipyard over there.

DR. MARSHALL: The only reason I put North Island Naval Air Station was because it is a separation in the island, and so you wanted to get the two views of it. If it's inflammatory, I certainly would drop it. I'll figure out another way to use it.

MR. GEILENFELDT: Just the soot from the emission from vehicles going over that bridge collects in my front yard.

DR. MARSHALL: Is that what I see every morning in the haze that comes over there?

MR. GEILENFELDT: It turns black, and it's all over everything.

MS. FARGO: Well, let's all think about the survey and get comments to Foster, and we can discuss it at the next meeting. All right?

Thank you very much for your efforts, Foster.

We now will be talking about the cleanup budget for fiscal year 2000, and Bill Collins will make that presentation.

MR. COLLINS: There is no overhead for this particular presentation, and I didn't do one because the numbers would be too small.

Everybody should have one of the handouts I prepared that lists the budget, and on the back of it you'll notice I've got some funding criteria items here. This works in fine coming right after the risk presentation how we rank the sites, and now here's how we spread the funding.

At our command we have a general rule of, first of all, we pay our overhead. We pay our salaries. We pay for the administrative record. We pay for things like that.

It's a very small part of the budget, but we make sure that the records are kept and the people are employed to do the job, Navy employees and contractor employees.

Our next item is we take care of any long-term monitoring or long-term operation requirements that we have. If we're out there normally looking at a landfill doing quarterly

monitoring or yearly monitoring, we don't want it just to stop. We want to keep it going, so we take care of those expenses.

If we're out there operating machinery a few years on a removal or a cleanup of some sort, we don't want to stop. We want to keep that going. We want to take care of those high risk sites -- eliminate the risk or at least reduce it as much as we can.

The next thing we go to is we look at the projects that we had from last year that we didn't get to fund. For some reason we ran out of money, which normally happens. We run out of money and we had two or three more jobs that we would have liked to do, but we couldn't get to them, so we move them to the front and fund those.

The next category is we have some sites where we want to do some work and we have legal agreements. At North Island we have our Federal Facilities Site Remediation Agreement, the FFSRA, and we use that to bolster our requests for money to cleanup our sites, to investigate them.

And in the end after all of those things, then we fall back on risk. We do high risk first. Then supposing we had an unending supply of money, we would do medium risk and then low risk, and then we'd have no risk and we could go home.

That's generally how the command does it. For North Island because we have, number one, projects that are ongoing, we take care of those first, the long-term monitoring requirements. So when we go through these on the other side, you'll see that several sites are being funded because of that reason.

And then we have ongoing removal actions, such as the work that Richard's doing at Site 9. We don't want to stop that, and all of the tank work that he's got going.

And then we have some high risk sites where we've got ongoing studies. And it's like Site 1 --

MR. MACH: One quick thing. If you look under Item 2 where it says "USG01, 02, 03, 04," you can write a little note to yourself that USG04 is the same as OU 19 and 20, so that's the big plume. It started off as a nice, simple tank site and it expanded into that big TCE groundwater plume. So USG04 is actually OU 19 and 20.

MR. COLLINS: And it's listed on the front side, too, in the explanation, but Richard's right.

This is how they control it in the budget when they're doing the planning with the folks in Washington.

Like I said, we go onto the ongoing studies. We're working on the CDF. We're still doing studies at Site 9, doing studies at Site 11 to come up with a Record of Decision to do the final remediation; and we're doing work at the golf course, too, still working on investigations there.

And then finally we have some sites with new studies. And over at Site 2 -- which is the old Spanish Bite Landfill, which many of you have been to on field trips -- we've done some removals there. We've done a lot of investigations. Well, in that area there are a couple other outside spots where we're going to do a little investigation there, and then we're going to combine that whole area of Site 2 and Solid Waste Management Units 76, 77 and 132 into one big package and call it Operable Unit 2 and go do a Record of Decision on that, clean that up and be done with that whole mess at once. So that's our goal.

So now if you look back to the other side, you can see where we're going to spend our money. Next year we're budgeted to have $8,450,000 to spend at North Island. Most of it is going towards cleanup. That's well within the Navy's goal to spend most of our money on cleanup and spend the remaining money on studies that hopefully will lead to a cleanup pretty soon.

MR. McCAULEY: How much do you have for this year?

MR. COLLINS: Approximately the same amount of money. We were ready to spend more. We're fairly aggressive at North Island, and we generally have a couple of projects sitting, and we

just need a little bit more money. So if somebody else isn't doing the job somewhere else in the country, we're there. We have our hands out.

Come September if nobody else can execute it, we can.

MR. MACH: I wanted $16 million. They kind of laughed at me.

MR. COLLINS: So you can see here Site 1, we're going to be out doing remedial investigation. There's a whole bunch to that. There's an ecological risk assessment. We'll be monitoring the confined disposal facility. We're going to take over the structural monitoring from the group that built it, and we're going to do groundwater monitoring also.

Other projects include the landfill maintenance and the groundwater monitoring at Sites 2 and 5. There we have some Water Board

requirements, too, for monitoring groundwater, and we're going to take care of those problems. In fact, in these two cases we're going to add a little bit of investigation into that same contract and go out and look at some other SWMUs we call them, Solid Waste Management Units.

And we have money in here for removal action coming up at Site 5 that Richard's given presentations on before. We have a teardrop that has organic contaminants in there -- volatile organic contaminants that are posing a problem. We're going to clean those up.

And we're putting more money into Site 9, like I said. We're doing groundwater monitoring out there. We'll be working on the feasibility study.

I don't want to actually go through line by line with you here, but I want to be able to tell you that we're doing quite a bit on North Island for 8 million bucks.

Probably the most interesting thing in here -- actually, we're going to spend some money on an innovative study. We're working with the USGS and an organization that's composed mostly of state environmental agencies from California -- in fact, all around the country -- and they're trying to come up with ways that are uniform so if it's approved in one state, another state can accept it

without having to go test it. So if somebody's done it in New Jersey or Georgia or somewhere and it works fine, California can say "Okay. We know it's been tested. You can use it in our state."

And what we're going to try is some diffusion sampling which involves a special plastic bag of water and chemicals migrating through it, and later on we'll probably have Richard give you a little presentation on it. But we're going to work that out with the USGS. We anticipate it's going to cost us $25,000. It's not a lot of money but if this works and we can work with California with everybody, it's going to save us a lot of money in the future in North Island.

So sometimes we do things that are a little off the wall, but our goal is to help our program here, help the community in the long run.

MR. McCAULEY: Well, can I ask a question?

MR. COLLINS: Sure.

MR. McCAULEY: How much are you spending at the Amphib base?

MR. COLLINS: The Amphibious base for this year is not budgeted to get additional funds. We have funds in a contract left over from last year, and we're going to spend that money. Probably a million dollars. We're not ignoring it. There's a reason, and even then North Island has most of the high sites for here.

Almost all the biggest problems are at North Island. It makes sense to take care of them first. We'd like to be able to do everything, but there's not enough money, and there's not enough of us or enough time in the day, so that's three strikes.

MR. McCAULEY: Okay.

MR. COLLINS: Are there any questions I can answer or any questions I can't answer? Thank you.

MS. FARGO: Thanks, Bill. That was a good presentation.

Now to Site 9 remediation update. Rich, you have minus 13 minutes.

MR. MACH: It's not a problem. I can easily talk fast.

Just real quick on the USGS, that's the United States Geological Survey. We were going to try to have Charles Cheng next month, December 1st, give a presentation on groundwater. He will probably not be able to make that meeting but he said he can make the January 20th meeting instead. He's not sure when he's getting back from his Thanksgiving vacation.

Since I was going to give an innovative technology presentation in January, I can move that up. I can talk about either the diffusion samplers or the chemical oxidation or possibly fit them both in. I'm not sure how I'm going to do that, but I'll get one or both of those in next time out.

MS. FARGO: Okay.

MR. MACH: This will go pretty quick. We've been giving monthly updates on the pilot tests, the removal action we're doing for Site 9. Again, this is a map showing the pilot test area. We've got the two red wells are the steam injection wells.

Our seven blue wells around there, those are the free product recovery wells and the soil vapor extraction wells.

And then you can see there's a whole bunch of TVT wells. There's 1 through 5 and there are 6 through 10, so there's 10 wells and 8 of those are our temperature and vapor probes. So we're measuring the temperature in the subsurface and measuring the vapor that we're getting across there.

We started about five weeks ago injecting steam into SIW1 -- I'm sorry -- SIW2, Steam Injection Well 2, which is the lower red well right there. About a week and a half ago we started injecting into SIW1.

I've got a few graphs right here that will show you how the temperature is moving across the surface.

This right here is temperature probe 6. This is the closest probe to SIW2, the first steam injection well that we started injecting steam into. It's about two feet away, and you can see that we've got five temperature probes at different depths in the subsurface. We've got 4 feet below ground surface, 7, 9, 11, and 14. Four and seven are in the soil, basically the vadose zone, so there is no groundwater there. Nine and 11 are right at the free product level or right at the level where the floating fuel is sitting on the water table. And then 14 is into groundwater beneath that floating product.

You can see that when we started up on September 11th, the temperature went up very quickly, and we're putting in steam which is 212 degrees Fahrenheit, and we got up to this 212 degree range in essentially about a week, and almost all the areas in the groundwater took an extra week and a half to actually get that water heated up to essentially boiling temperature.

As we moved further out, we've got temperature probe 7. You can see again that the upper soil heated up real quick. The steam got into the soil and it heated those probes up quickly. But you can see that the lower depths, the 11 feet which is in the product area and the groundwater, are taking longer to heat up. So you can see the temperature is definitely coming up and that it is dissipating outward from the wells.

Here's 8. This one is about 15 feet away from the steam injection well, and you can see it took about two weeks for it to even get there in the surface soil, but then it's following the exact same path coming up, but the temperature is increasing.

The other two probes that we have out there which are at 30 and 45 feet are essentially flat lines across. It has not reached those distances yet, so I didn't bring any graphs to show you those.

And like I said, about a week and a half ago we started injecting steam into SIW1. So you can see we were monitoring the temperature in those probes for the first three and a half weeks that we were injecting the SIW2. They're about 50 feet away from SIW2, and so there was no effect

from that. But as soon as we started injecting into SIW1, you're seeing the same -- essentially the same curves for this area.

Again, this is two feet away from SIW1. This is about four feet away. And then that is 10 or so feet away. As you can see, we're getting the same trends in these wells.

We were hoping to be done with the pilot test about the end of this month; however, we've taken extra caution at the site and we've been injecting steam slower than we had initially anticipated. We wanted to make sure we didn't have any problems like we've had in the past. That is the worst site that we have. So we're looking at the pilot test extending at least another month. And we had a meeting with Ray Lens today and told them that. They're on board with that plan, so we're going to keep heating up the subsurface here so we can get all the design parameters necessary before we go ahead with the full scale design for treating the rest of the plume other than just this one pilot area.

So I told you we'd give you monthly updates on where we're at on the pilot tests, and that's basically it if there are no other questions.

MR. VAN ROOY: What are we going to do? Pay for ice with contaminants?

MR. MACH: That brings up a good point. Something that we have been -- another thing we've been observing is the free product in the recovery wells. If you recall when Merry presented last month, she said that we recovered about 75 gallons or so of product from the couple of wells that we were actually pumping the product. With the increase in temperature, it has made the floating product more mobile, and in the last month we've removed about 500 gallons of it. So we're trying to get as much of it out as possible in the liquid format. But steam is helping to push it and make it more mobile, kind of like molasses. If you heat it up, it flows better. It can get to our wells. We can pull it out.

It also has another effect there. By heating up these volatile organic compounds, we're helping to volatilize them out, and we're able to suck them out with the soil vapor extraction system factor, so it's two-fold in remediating the system -- speeding up the remediation of the system.

MR. McCAULEY: Richard, the steam is helping the product that captured the soil? It comes out as well?

MR. MACH: Right. It's heating up the product. It's essentially fuel, and it's got these chlorinated volatile organic compounds intermingled in with the fuel. So it helps to volatilize those out of the fuel, and you can suck those off in the SVE system pretty easily. And then the fuel is more mobile and it goes to the wells and we can suck it out with a regular pump. We're sucking fuel out just like you would suck water out of a groundwater well.

DR. MARSHALL: When did you put in the second wells steam?

MR. MACH: We installed all of the wells at the same time.

DR. MARSHALL: Steam in the second well, what date? That's what I'm asking you. The people up at Ludlow want you to at least let them know what time. They think he started this earthquake.

MR. MACH: We started about the 7th of October.

DR. MARSHALL: A week late we had the earthquake.

MS. FARGO: Thank you, Rich. That was great.

Now back to Bill for the site tour discussion.

MR. COLLINS: Last month I believe Bob Geilenfeldt and I were talking, and he expressed some interest in taking a tour of the North Island sites.

MR. GEILENFELDT: Yes, sir.

MR. COLLINS: And being in the Navy and loving to give tours, we would be willing to go out again in October or November or early December if somebody would like to take a tour, if somebody could give me an idea of when, who would like to go, I'll look into it.

MR. GEILENFELDT: December, right around the RAB meeting. Is that possible? Something like November 30th or December 2nd or somewhere in there? The day before or the day after that meeting?

MS. FARGO: My thought would be that we push for our membership drive, if we're going to have the ad in the paper and hopefully have some new members at the next meeting, which is December 1st. That's my only concern, and I hate to ask you, but maybe we need to wait until maybe even the February time frame. But if we have no -- I don't know. We can evaluate it next month.

MR. COLLINS: We can do more than one tour.

MS. RAUN: Maybe you could use the tour to kind of get members. You can throw in a carrier, I don't know, lunch.

MS. FARGO: Oh, no. We won't be going on a carrier.

MR. COLLINS: We can't do that.

MR. GEILENFELDT: I would assume this is an all day affair.

MR. COLLINS: Maybe three to four hours.

MS. FARGO: And we do the tour at least annually. I think we did one about last December or so.

MR. MACH: I think Vicki came up with a good idea. You could send out a member solicitation and say, "Hey, if you'd like to learn more about this, we're going to have a tour of the

sites" in preparation for getting people to join the RAB, and it might be good to do that prior to the December 1st RAB meeting. However, if you're going to try and do that, it might be better to try to do it on a weekend, in which case you've got Thanksgiving right before then, and are you going to have enough time to set that up prior to the meeting.

MS. FARGO: I would rather not rush it, because I don't think we're talking about not doing it for too long. I do think it would be a great carrot to dangle, and maybe in your flier you could say "There's going to be a tour. If you have any interest, take the tour." And we can put it in the ad, too.

MR. COLLINS: I would think that January would work fine. About the third week of January?

MS. FARGO: And we do need it on a Saturday.

MR. COLLINS: Oh, yes. And we would take a tour of the North Island sites and the NAB sites.

MS. FARGO: What's going on at NAB that was so interesting?

MR. COLLINS: We still need to see where the sites are so you can picture it because reports are being prepared all the time.

MR. GEILENFELDT: So you had closure of Site 6. Is that done?

MR. COLLINS: We didn't have any removal activity.

MR. MACH: The Site 6 closure report was submitted. That was submitted to Douglas Bautista at DTSC on about the 30th or so of September for a 60-day public and regulatory review but a recommended no further action.

MR. GEILENFELDT: So you're saying on a Saturday then, approximately the third week in January.

MR. COLLINS: Yes. I would recommend that. That should give the RAB enough time to generate some interest. The fact that it's after the holidays should help, too, because people are occupied with either buying Christmas presents or going to parades or watching football, any number of things.

MR. GEILENFELDT: Just avoid the Super Bowl weekend.

MS. FARGO: When is that?

DR. MARSHALL: The third weekend, but it's on a Sunday.

MR. COLLINS: We don't compete with the Super Bowl.

MS. FARGO: We will keep that as an agenda item for discussion of the tour plan for early in 2000.

MR. COLLINS: We should really discuss that on December 1st.

MS. FARGO: Right.

MR. CLARK: Are you saying the next meeting is December 1st?

MS. FARGO: Yes, which is a Wednesday night, I believe. Okay.

Now we have ten minutes for presenter evaluations. Is that for us to fill these out?

MR. MACH: That is for you to either tell us right now. Some of our presenters are not always here all the time. Michael's not here all the time, although he's here quite a bit. You can tell us what you thought or you can just fill out the form and give it to us. If you want to give us immediate feedback, we're open for that.

And also if you have any feedback on the form itself after using it through a couple of presentations, are there other questions you'd like to add when we reproduce the form for the next speakers?

MS. FARGO: I've got a comment about an item. Item No. 2 about the use of acronyms, maybe we could say clear use of acronyms or helpful use of acronyms? Everybody uses them, and you ought to know are they being used well? Are they understood? What do you want done on this?

MR. COLLINS: Are they explained? Are they clear?

MR. MACH: Did we tell you what the acronym was at least the first time we used it? Did we use it too much?

MS. FARGO: Okay. So anything having to do with the use of an acronym.

MR. MACH: Right.

MS. FARGO: So a high mark means you used them well, we understood them type thing? Got it.

MR. COLLINS: And if you think we need to explain it, you can make a number like I did, and add a line and put in your little remark.

MS. FARGO: Okay.

MR. GEILENFELDT: So 5 is max?

MR. MACH: 5 is excellent; 1 is terrible. I should probably add an N/A topic in there, too, at some point, too.

MR. McCAULEY: Are you guys being evaluated on your --

MR. COLLINS: No.

MR. MACH: No. But it's a way for us to make sure we --

MS. FARGO: Make a better RAB; right?

MR. MACH: Make a better presentation.

DR. MARSHALL: This is something we talked about this last month just so that we could tell them what they were doing for us, and I don't know whether you'all are going to do it or not, but that was the basis for having this made up.

MS. FARGO: Right.

MR. MACH: It's good for us. If we don't get feedback, we just think we're doing awesome; and if you don't tell us otherwise, we don't communicate.

MS. FARGO: It's good for the Community Co-Chair because I need to know if you're all thinking this is the worst thing in the world and if you're dropping off, I need to know that.

Okay. Are there any other public comments, questions at this point?

MR. COLLINS: I just want to remind everyone to pick up this particular sheet.

This is something else we added in the past few months, Larry. This is a list of all the other projects that are going to in North Island that we didn't speak about tonight. So those are some of the comments that came from the community before was that we do so much that we have to squeeze everything into this tiny little burst. And we said well, the only way to alleviate that problem is spend more time on topics. And so we'll have fewer topics every night, and that means we really need to have something else to tell you about what we're doing on our projects, so that's what we've done with this.

This is the third month. I think it works out pretty good.

MS. FARGO: It's very helpful. Actually, as the members take away the Status Update Report each month, and if you have a little time to read it -- I never know how to get input on topics that we could make future agenda items; but by having this, I'm pretty aware of the status of every single site.

So if there's something that I think, "Gee, I don't have a clue about that. We haven't talked about that for a while," then I call up Bill or Rich and get some input. So I do try to read this every month because it's a great summary tool. Okay.

Agenda items for next RAB meeting. Several have come up tonight that we're going to keep on the agenda. And then Rich is going to --

MR. MACH: I can come up with one or two innovative technology presentations.

MS. FARGO: At least one.

MR. MACH: Right. I'd like to know is the continual every month Site 9 update good for you guys? Okay. We'll continue on with that. I just wanted to make sure.

MS. FARGO: We're learning a lot.

MR. GEILENFELDT: And 19 and 20 are going to continue?

MR. MACH: 19 and 20 are continuing to move along, but it's in kind of a hiatus stage right now with the -- we're going to cut down these diffusion samplers. So if I add the diffusion samplers to the agenda, I'll be using OU 19 and 20 as an example, and I'll talk about all the other things that go on about how we're making USGS do the work for us; how we're coordinating with the Air Force; the ITRC, which is that agency or that group that Bill talked about. It's the Interstate Technology Regulatory Cooperative. There are 27 or 28 states represented on that group, and they're working with us and the Air Force and USGS to come up with a protocol. I can bring all that.

MR. GEILENFELDT: That seems to be the second most serious case that we have here? Would you say that -- judging from what I saw in the prior --

MR. MACH: That is probably the second biggest site that we have on North Island that we know of at this time.

MS. FARGO: 19 and 20?

MR. COLLINS: Yes.

MR. GEILENFELDT: That's on Site 4?

MR. MACH: Building 329, 395, and 472 plume.

MS. FARGO: Okay. All right.

MR. GEILENFELDT: Can I regress and ask one question?

MS. FARGO: Sure.

MR. GEILENFELDT: When I was over on Doggie Beach the other day, I walked inside the gate and I saw a hazardous material phone. In other words, that's on Ocean Boulevard as you're coming out of the Ocean Boulevard.

My first question is who uses that phone and who is so notified with that phone in the event that hazardous materials are hauled through Coronado?

MR. COLLINS: This phone is on the beach itself?

MR. GEILENFELDT: No. I was snooping around the inside of the gate.

MS. FARGO: On what gait?

MR. GEILENFELDT: As you exit, there's a phone mounted, free standing black phone that says --

MS. FARGO: Did you see the little truck pull off area next to the gate sort of like a holding area?

MR. GEILENFELDT: It's a holding area right next to where the golf course is there.

MS. FARGO: So maybe truckers call or something.

MR. GEILENFELDT: I was interested in that. I'd never seen it before.

MR. COLLINS: We weren't aware of that. This is the first I've heard of it in ten years being out there. I can check with PWC.

MR. GEILENFELDT: I was just interested in who uses that phone and who is so notified if hazardous materials are transported through Coronado.

MR. COLLINS: Well, some hazardous materials if they leave North Island, leave through that gate.

MR. GEILENFELDT: Down the strand, I assume?

MR. COLLINS: And there are many other cases when that gate is opened and used for one or more reasons rather than the main gate. And there may be -- there could be several reasons because we try to restrict truck traffic on North Island.

MR. GEILENFELDT: Yeah. The incoming goes right past my house every morning. I know about that.

MR. COLLINS: I can check to see what it's all about.

MR. GEILENFELDT: I was just curious as to how that's used.

MR. COLLINS: Okay.

MS. FARGO: Okay. Are there any other questions?

MR. McCAULEY: I've got one last question.

Have we heard from our previous Navy Co-Chairs and Community Co-Chairs? Have we heard anything from those folks?

MR. LOCKE: I sent them an e-mail announcing this meeting and didn't hear anything back from them.

MR. MACH: This is the previous Co-Chairs?

MR. McCAULEY: Well, Laura Hunter and Dottie Marron.

MR. MACH: She was really the only other Co-Chair -- Community Co-Chair.

MR. COLLINS: Dottie or Laura?

MS. FARGO: There's only been two in the whole history? And I'm almost up.

DR. MARSHALL: No. You're going to be re-elected.

MR. MACH: By a landslide.

MS. FARGO: Okay. There being nothing further, this meeting stands adjourned.

(Whereupon, at 8:20 p.m., the meeting was adjourned.)

STATE OF CALIFORNIA,)

: ss.

COUNTY OF SAN DIEGO.)

I, Nancy A. Lee, CSR No. 3870, hereby certify that I reported in shorthand the above proceedings, on Thursday, October 21 1999, at 640 Orange Avenue, Winn Room, in the City of Coronado, County of San Diego, State of California; and I do further certify that the above and foregoing pages, numbered from 1 to 88, inclusive, contain a true and correct transcript of all of said proceedings.

DATED: _____, 1999.

_____

Nancy A. Lee